

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims:

Listing of Claims:

1. (Currently Amended) A method for operating a data communication system, comprising:

originating an electronic commerce transaction at a first party;

transmitting the electronic commerce transaction through the data communications network towards a second party;

inputting the electronic commerce transaction to an electronic commerce transaction filter that is interposed between two network components at a location where electronic commerce transaction related messages and message data are cast in a known form;

~~for enabling~~ using the electronic commerce transaction filter to interpret at least one characteristic of the electronic commerce transaction in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data; and

in response to interpreting the at least one characteristic of the electronic commerce transaction, operating the electronic commerce transaction filter to take some action with respect to the electronic commerce transaction.

2. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an analysis of the electronic commerce transaction, ~~for the purpose of collecting~~ using information collected across an administrative domain, and storing information generated by the analysis.

3. (Cancelled)

4. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a modification of the electronic commerce transaction.
5. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a redirection of the electronic commerce transaction to a third party.
6. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an extraction of information from the e-commerce transaction ~~for recording the information for statistical or other purposes~~ and storing at least a portion of the extracted information.
7. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification of the authenticity of the electronic commerce transaction.
8. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a verification of the authenticity of a component part of the electronic commerce transaction.
9. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is comprises a verification that the electronic commerce transaction is in compliance with a regulation.
10. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is comprises a verification that the electronic commerce transaction is in compliance with a standard.
11. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a termination of the electronic commerce transaction.

12. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is a delay of the electronic commerce transaction.

13. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an encryption of all or a part of the electronic commerce transaction, and sending the encrypted electronic commerce transaction to another destination.

14. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is generating an alert if-for the case where an analysis performed by the electronic commerce transaction filter indicates that a-certain-at least one preexisting filtering criterion is met.

15. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is passing the electronic commerce transaction through the electronic commerce transaction filter without modification in an unmodified form and without recording any information regarding the electronic commerce transaction.

16. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules to the contents of one or more messages that comprise the electronic commerce transaction.

17. (Original) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules that are independent of the contents of one or more messages that comprise the electronic commerce transaction.

18. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined

rules based on at least one of an origin ~~or~~ and a destination of the electronic commerce transaction.

19. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is recording at least one predetermined type of information, and further comprising accumulating recorded information from a plurality of electronic commerce transactions, ~~and making~~ providing access to the accumulated recorded information ~~available to interested parties~~.

20. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is recording at least one predetermined type of information, and further comprising accumulating recorded information from a plurality of electronic commerce transactions, ~~and deriving~~ a filtering criterion from the accumulated recorded information, and filtering, ~~for use in the same or in another electronic commerce transaction filter,~~ with the derived filtering criterion.

21. (Previously Presented) A method as in claim 1, wherein operating the electronic commerce transaction filter is performed in parallel in a plurality of electronic commerce transaction filters that are disposed between two layers of an administrative domain hierarchy.

22. (Previously Presented) A method as in claim 1, wherein operating the electronic commerce transaction filter comprises decrypting all or part of the electronic commerce transaction.

23. (Previously Presented) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is an encryption of all or a part of the electronic commerce transaction using at least one cryptographic key, and further comprising sending the at least one cryptographic key to another location.

24. (Original) A method as in claim 1, wherein the action taken with respect to the

electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with a predetermined policy.

25. (Currently Amended) A method as in claim 1, wherein the action taken with respect to the electronic commerce transaction is determining whether the electronic commerce transaction ~~may be~~ is fraudulent.

26. (Currently Amended) A data communication system, comprising:

a first party for originating an electronic commerce transaction and for transmitting the electronic commerce transaction through a data communications network towards a second party; and

an electronic commerce transaction filter that is transparently interposed between two data communication network components at a location where electronic commerce transaction related messages and message data are cast in a known form ~~for enabling the electronic commerce transaction filter to interpret,~~ said filter for interpreting at least one characteristic of the electronic commerce transaction in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data, said filter being responsive to interpreting the at least one characteristic of the electronic commerce transaction for operating on the electronic commerce transaction in accordance with at least one filter criterion for taking some action with respect to the electronic commerce transaction.

27. (Currently Amended) A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, the method comprising ~~steps of:~~

intercepting the electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components at a

location where electronic commerce transaction related messages and message data are cast in a known form;

~~for enabling the electronic commerce transaction~~using the filter to interpret at least one characteristic of the electronic commerce transaction in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data; and

in response to interpreting the at least one characteristic of the electronic commerce transaction, operating the electronic commerce transaction filter in accordance with at least one filter criterion so as to record at least one predetermined type of information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, and ~~making~~providing access to the accumulated recorded information ~~available to interested parties~~.

28. (Currently Amended) A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, the method comprising:

intercepting the electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components at a location where electronic commerce transaction related messages and message data are cast in a known form;

interpreting with the electronic commerce transaction filter at least one characteristic of the electronic commerce transaction in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data; and

in response to interpreting the at least one characteristic of the electronic commerce

transaction, operating the electronic commerce transaction filter in accordance with at least one filter criterion to record at least one predetermined type of information, and further comprising steps of accumulating recorded information from a plurality of electronic commerce transactions, deriving at least one of a new ~~or~~ and a modified filtering criterion from the accumulated recorded information, and further comprising a step of offering at least one of the new ~~or~~ and the modified filtering criterion for use by another electronic commerce transaction filter.

29. (Previously Presented) A method of conducting business over the Internet, wherein parties interact by originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through the Internet to a second party, where the electronic commerce transaction comprises at least an offer to provide goods or services based on stipulated terms; the method comprising:

intercepting an electronic commerce transaction with an electronic commerce transaction filter that is interposed between two data communication network components;

redirecting the intercepted electronic commerce transaction to a third party; and

providing the third party the opportunity to provide the goods or services for the stipulated terms or for other terms related to the stipulated terms.

30. (Previously Presented) A method as in claim 29, wherein providing enables the third party to provide the goods or services for a price that is either less than or greater than a price set by the stipulated terms.

31. (Previously Presented) A computer-readable medium comprising computer program instructions for directing a computer to execute a method, in response to originating an electronic commerce transaction at a first party and transmitting the electronic commerce transaction through a data communications network towards a second party, inputting the electronic commerce transaction to an electronic commerce transaction filter that is

transparently interposed between two network components at a location where electronic commerce transaction related messages and message data are cast in a known form; interpreting with the electronic commerce transaction filter at least one characteristic of the electronic commerce transaction in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data; and in response to interpreting the at least one characteristic of the electronic commerce transaction, operating the electronic commerce transaction filter to take some action with respect to the electronic commerce transaction in accordance with at least one filter criterion.

32. (Previously Presented) A computer-readable medium comprising computer program instructions for directing a computer to respond to a receipt of electronic commerce transaction related information that is originated at a first party for transmission through a data communications network towards an intended party, the computer being coupled between a first network component and a second network component at a location where the electronic commerce transaction related information exists in a known form; the computer program instructions causing the computer to interpret the electronic commerce transaction related information based on knowledge of the known form; and to take some action with respect to the electronic commerce transaction.

33. (Currently Amended) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is an analysis of the electronic commerce transaction, ~~for the purpose of collecting and using information collected~~ across an administrative domain.

34. (Cancelled)

35. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is a modification of the electronic commerce transaction.

36. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is transmitting the electronic commerce transaction to another party in addition to, or in place of, the intended party.

37. (Currently Amended) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is an extraction of information from the e-commerce transaction related information ~~for statistical or other purposes~~ and storing at least a portion of the extracted information.

38. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is a verification of the authenticity of the electronic commerce transaction.

39. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is a verification of the authenticity of at least one component part of the electronic commerce transaction.

40. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with at least one of a regulation and a standard.

41. (Previously Presented) A computer-readable medium as in claim 32, where the electronic commerce transaction related information comprises at least one message that comprises an electronic commerce transaction sub-transaction, and where the action taken is a reconstruction of a complete electronic commerce transaction from a plurality of electronic commerce transaction sub-transactions, at least some of which are stored in a persistent memory.

42. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is at least one of termination of

the electronic commerce transaction, and delay of the electronic commerce transaction.

43. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is at least one of encrypting all or a part of the electronic commerce transaction related information, and decrypting all or a part of the electronic commerce transaction related information.

44. (Previously Presented) A computer-readable medium as in claim 43, where execution of the computer program instructions implements an electronic commerce filter function that is disposed between a pair of cryptographic proxy functions.

45. (Currently Amended) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is generating an alert if for the case where an analysis indicates that the electronic commerce transaction ~~may be~~ is fraudulent.

46 to 47. (Canceled)

48. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is selected at least in part by applying predefined rules to the contents of one or more messages that comprise the electronic commerce transaction related information.

49. (Currently Amended) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is recording at least one predetermined type of electronic commerce transaction related information, and further comprising accumulating recorded information from a plurality of electronic commerce transactions, ~~and making the accumulated recorded information available to interested parties.~~

50. (Currently Amended) A computer-readable medium as in claim 32, where the action

taken with respect to the electronic commerce transaction is recording at least one predetermined type of electronic commerce transaction related information, and further comprising accumulating recorded information from a plurality of electronic commerce transactions, ~~and using the accumulated recorded information for at least one of deriving and modifying at least one criterion, or modifying at least one criterion, that is considered when taking an action with regard to an~~ and executing a filter on another electronic commerce transaction using the at least one criterion.

51. (Previously Presented) A computer-readable medium as in claim 32, where the computer program instructions direct one or more computers so as to operate simultaneously on a plurality of electronic commerce transactions within an administrative domain.

52. (Previously Presented) A computer-readable medium as in claim 32, where the computer program instructions direct one or more computers so as to operate simultaneously on a plurality of electronic commerce transactions within an administrative domain for enforcing at least one administrative domain policy uniformly across the plurality of electronic commerce transactions.

53. (Previously Presented) A computer-readable medium as in claim 32, where the action taken with respect to the electronic commerce transaction is a verification that the electronic commerce transaction is in compliance with a predetermined policy.

54. (Previously Presented) A computer-readable medium as in claim 32, where the action to be taken with respect to a particular electronic commerce transaction is specified by contacting another computer software system, and receiving a reply from the other computer software system.

55. (Previously Presented) A computer-readable medium as in claim 32, where the computer program instructions that cause the computer to interpret the electronic commerce transaction related information do so in a manner that does not require

knowledge of a particular electronic commerce program that generated the electronic commerce transaction related information in the known form.

56. (Currently Amended) A computer-readable medium as in claim 32, where the known form of the electronic commerce related information comprises data encoded according to a specification ~~such that other programs capable of applying the specification to the known form of the electronic commerce transaction related information can meaningfully process the data~~ that is known to at least one other electronic commerce program.

57. (Currently Amended) A computer-readable medium as in claim 32, where the known form of the electronic commerce related information comprises data produced by an e-commerce program in accordance with a predetermined specification, the known form of the electronic commerce transaction related information being a form that ~~can be processed by~~ is known to another e-commerce program that supports the same predetermined specification.

58. (Currently Amended) A computer-readable medium as in claim 32, where the known form of the electronic commerce transaction related information is a form that ~~can be analyzed~~ subject to analysis in a manner that is independent of a particular electronic commerce program from which the electronic commerce transaction related information originates.

59. (Currently Amended) A computer-readable medium as in claim 58, where the action taken with respect to the electronic commerce transaction is comprises an accumulation of at least some of the electronic commerce transaction related information based on knowledge of the known form of the electronic commerce transaction related information ~~for enabling a combination and combining of~~ electronic commerce transaction related information that originates from different electronic commerce programs.

60. (Currently Amended) A computer-readable medium as in claim 58, where the action taken with respect to the electronic commerce transaction is an enforcement of a policy at

the electronic commerce transaction level, where the enforcement of the policy is based on knowledge of the known form of the electronic commerce transaction related information ~~for enabling the policy to be~~wherein said policy is enforced for electronic commerce transactions that originate from different electronic commerce programs.

61. (Previously Presented) A computer-readable medium as in claim 32, where the computer program instructions that cause the computer to interpret the electronic commerce transaction related information are further operable for distinguishing electronic commerce transaction traffic from other traffic passing between the parties based on knowledge of the known form of the electronic commerce transaction related information.

62. (Previously Presented) A computer-readable medium comprising computer program instructions for directing at least one computer to respond to a receipt of electronic commerce transaction related information that was originated at a first party and transmitted through a data communications network towards an intended party, the computer being coupled between a first network component and a second network component at a location where the electronic commerce transaction related information exists in a known form; the computer program instructions causing the computer to interpret the electronic commerce transaction related information based on knowledge of the known form; and in response to interpreting the electronic commerce transaction related information, performing at least one of modifying the electronic commerce transaction related information before passing it towards the intended party, blocking the electronic commerce transaction related information so that it does not reach the intended party, and passing the electronic commerce transaction related information, with or without modification, to a party other than the intended party.

63. (Previously Presented) A computer-readable medium as in claim 62, where the computer program instructions that cause the computer to interpret the electronic commerce transaction related information do so in a manner that does not require knowledge of a particular electronic commerce program that generated the electronic commerce transaction related information in the known form.

64. (Currently Amended) A computer-readable medium as in claim 62, where the known form of the electronic commerce related information comprises data encoded according to a specification ~~such that other programs capable of applying the specification to the known form of the electronic commerce transaction related information can meaningfully process the data~~ that is known to at least one other electronic commerce program.

65. (Currently Amended) A computer-readable medium as in claim 62, where the known form of the electronic commerce related information comprises data produced by an e-commerce program in accordance with a predetermined specification, ~~the known form of the electronic commerce transaction related information being a form that can be processed by another e-commerce program that supports the same predetermined specification~~ that is known to at least one other electronic commerce program.

66. (Previously Presented) A computer-readable medium as in claim 62, where the known form of the electronic commerce transaction related information is a form that can be analyzed independent of a particular electronic commerce program from which the electronic commerce transaction related information originates.

67. (Currently Amended) A computer-readable medium as in claim 66, where the action taken with respect to the electronic commerce transaction is an accumulation of at least some of the electronic commerce transaction related information based on knowledge of the known form of the electronic commerce transaction related information ~~for enabling a combination and combining~~ of electronic commerce transaction related information that originates from different electronic commerce programs.

68. (Currently Amended) A computer-readable medium as in claim 66, where the action taken with respect to the electronic commerce transaction is an enforcement of a policy at the electronic commerce transaction level, where the enforcement of the policy is based on knowledge of the known form of the electronic commerce transaction related information ~~for enabling the policy to be~~ wherein said policy is enforced for electronic commerce

transactions that originate from different electronic commerce programs.

69. (Previously Presented) A computer-readable medium as in claim 62, where the computer program instructions that cause the computer to interpret the electronic commerce transaction related information are further operable for distinguishing electronic commerce transaction traffic from other traffic passing between the parties based on knowledge of the known form of the electronic commerce transaction related information.

70. (Previously Presented) A system that operates to provide a service over a data communications network to a first entity having at least one electronic commerce transaction filter disposed within a first data processing system associated with the first entity for monitoring electronic commerce transactions, said at least one electronic commerce transaction filter being disposed at a location where electronic commerce transaction related messages and message data are cast in a known form and operating to interpret, based at least on a content of a filter criteria module, at least one characteristic of electronic commerce transactions in a manner that is independent of a particular electronic commerce program that originated the electronic commerce related messages and message data; further comprising a second data processing system associated with a service provider second entity, said second data processing system being coupled to said at least one electronic commerce transaction filter over the data communications network for at least one of receiving information from and sending information to the electronic commerce transaction filter.

71. (Previously Presented) A system as in claim 70, where said information comprises security-related information.

72. (Previously Presented) A system as in claim 70, where said information enables said service provider second entity to collect a record of electronic commerce transactions.

73. (Previously Presented) A system as in claim 70, where said information is received by said service provider second entity in an encrypted form.

74. (Previously Presented) A system as in claim 70, where said information is received by said service provider second entity, is time stamped, and is archived.

75. (Previously Presented) A system as in claim 70, where said information is received by said service provider second entity in an encrypted form using a public key of a public/private key pair chosen by the first entity, and is archived by said service provider second entity.

76. (Previously Presented) A system as in claim 70, where information that is sent from said service provider second entity comprises heuristics for use by said criteria module in detecting fraudulent electronic commerce transactions.

77. (Previously Presented) A system as in claim 70, where information that is sent from said service provider second entity is sent in accordance with a subscription service and comprises up-to-date information relating to regulations.

78. (Previously Presented) A system as in claim 70, where information that is sent from said service provider second entity is sent in accordance with a subscription service and provides at least one security check prior to completing an electronic commerce transaction.

79. (Previously Presented) A system as in claim 70, where information that is received by said service provider second entity is used to audit at least one policy used by the at least one electronic commerce transaction filter in order to certify the at least one policy is in agreement with at least one relevant criterion.

80. (Previously Presented) A system as in claim 70, where information received by said service provider second entity enables said second entity to re-direct a purchase order for at least one of goods or services to the second entity.